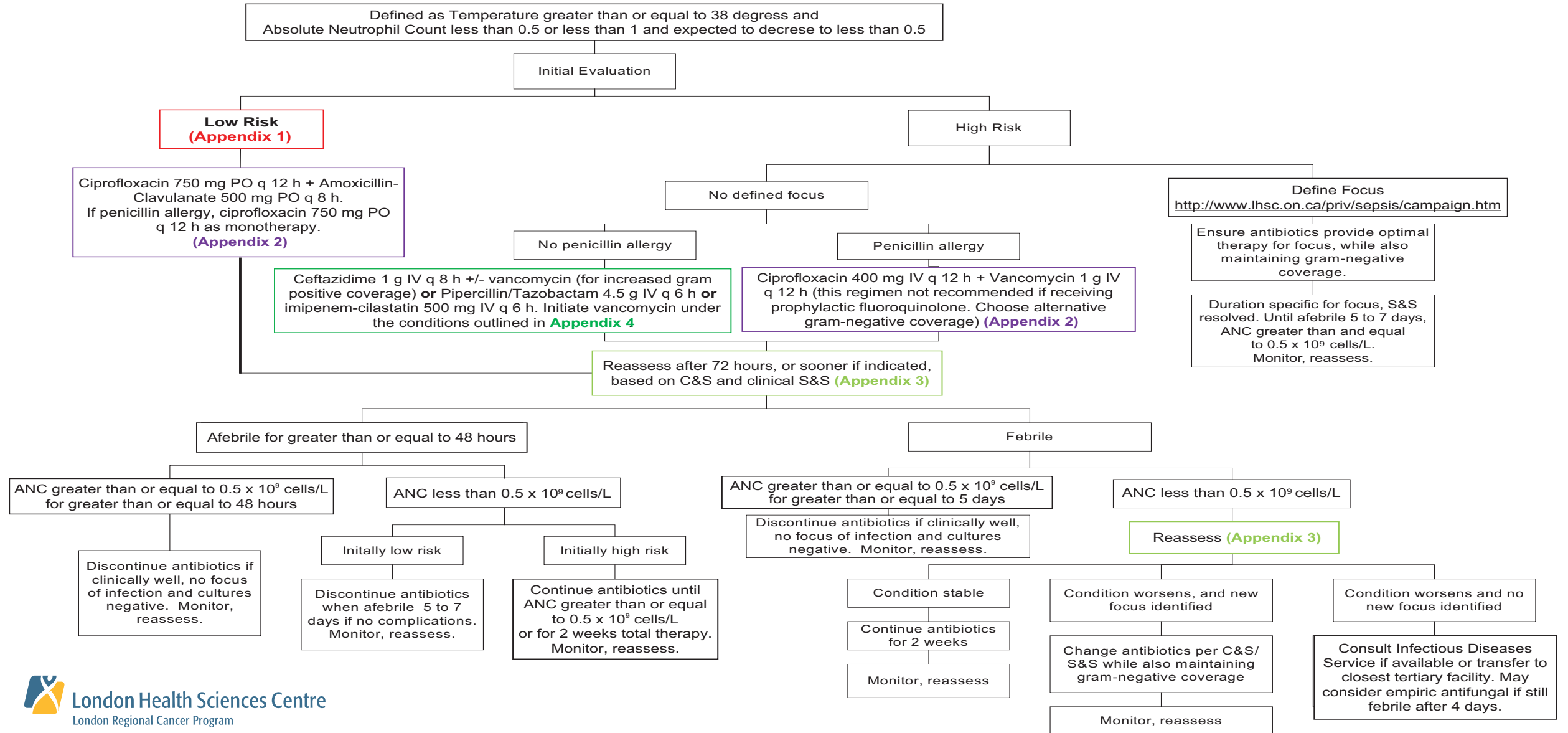


Decision Tree for Febrile Neutropenia: Medical Oncology Solid Tumour and Lymphoma Patients



DISCLAIMER

The London Health Sciences Centre (LHSC) and London Regional Cancer Program (LRCP) developed these guidelines for the purpose of assisting medical practitioners in the treatment of febrile neutropenic patients undergoing cancer chemotherapy. They apply only to solid tumours and lymphoma. They apply to inpatient management only.

These guidelines are general and the application must consider the variations in individual patients, types of infections being treated, antimicrobial susceptibility patterns, underlying causes of neutropenia, and expected time to recovery. It must be noted that no specific scheme, no specific drug or combination, and no specific period of treatment can be applied unequivocally to all patients with neutropenia and fever. LHSC will not assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information in this document.

**ADULT ONCOLOGY
FEBRILE NEUTROPENIA
PREPRINTED ORDERS**

KEY: R - REQUISITIONED P - PROCESSED (KARDEX)

NON-MEDICATION ORDERS	R	P	MEDICATION ORDERS	P
<p>Reason for Exam / Clinical History and Contact # required for all Radiology / Nuclear Medicine orders.</p> <p>UPON PATIENT ARRIVAL</p> <p>MONITORING / VITAL SIGNS:</p> <p><input type="checkbox"/> BP: Supine and Sitting/Standing, Temperature, HR, RR, SpO₂</p> <p><input type="checkbox"/> Weight: _____ kg</p> <p>INVESTIGATIONS:</p> <p><input type="checkbox"/> CBC, Diff, Electrolytes, Urea, Creatinine STAT, Glucose (random)</p> <p><input type="checkbox"/> INR, PTT</p> <p><input type="checkbox"/> Group and Reserve</p> <p><input type="checkbox"/> Peripheral blood culture x 2 sets 30 to 60 minutes apart. If central line, take both peripheral and central at same time.</p> <p><input type="checkbox"/> Urine C & S</p> <p><input type="checkbox"/> Culture other sites as indicated</p> <p><input type="checkbox"/> Notify MD On Call of significant findings</p> <p><input type="checkbox"/> Chest X-Ray PA Lateral: Indication febrile neutropenia</p> <p><input type="checkbox"/> AST, ALT, Total Bilirubin</p> <p>AFTER INITIAL ASSESSMENT</p> <p>MONITORING / VITAL SIGNS:</p> <p><input type="checkbox"/> Temperature, HR, RR, BP, SpO₂ q 4 hours, reassess at 48 hours</p> <p><input type="checkbox"/> Intake and output</p> <p><input type="checkbox"/> Activity as tolerated</p> <p>LABORATORY:</p> <p><input type="checkbox"/> Daily CBC, Diff, Electrolytes, Urea</p> <p><input type="checkbox"/> Serum Creatinine x 48 hours, then reassess</p> <p><input type="checkbox"/> Other bloodwork: _____</p> <p>DIET:</p> <p><input type="checkbox"/> Regular</p> <p><input type="checkbox"/> Other: _____</p>			<p><input type="checkbox"/> Start IV Sodium Chloride 0.9% at _____ mL/hour</p> <p><input type="checkbox"/> ANTIBIOTICS:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p><input type="checkbox"/> Acetaminophen _____ mg PO q _____ hours PRN temperature greater than or equal to 38°C</p>	
<p>PRESCRIBER'S PRINTED NAME / SIGNATURE / CONTACT #:</p> <p>DATE (YYYYMMDD):</p> <p>TIME:</p>			<p>NURSE INITIALS:</p> <p>DATE (YYYYMMDD):</p> <p>TIME:</p>	

NS3074 (Rev. 2012/07/17)

DISTRIBUTION: WHITE - Patient's Chart CANARY - Pharmacy PINK - Nurse

Appendix 1

Factors Favoring Low-Risk for Severe Infection in Febrile Neutropenia in Patient with Solid Tumors (non-hematological malignancies)

- Adjuvant Treatment
- Expected duration neutropenia of less than 7 days
- ANC greater than or equal to 1
- Non hematologic cancer
- No prior infection
- No obvious focus of infection
- No hypotension
- No confusion
- No diarrhea or vomiting
- Grade 2 mucositis or less
- Compliant (needs to come in if diarrhea or vomiting or can't take oral meds)
- Normal organ function (renal, hepatic, pulmonary, cardiac)
- No diabetes
- Does not live alone (friend or family member at home until neutropenia resolved)
- Access to medical care (less than 1 hour) and initial daily medical outpatient
- Follow-up especially re culture results

Appendix 3

Fever persisting more than 3 days and in whom no source or organism has been identified is suggestive of a non-bacterial infection, a bacterial infection resistant to the antibiotic(s) emergence of a second infection, inadequate serum and tissue levels of antibiotic, drug fever, cell wall-deficient bacteremia or infection at an avascular site, such as abscess or catheter.

Some patients with microbiologically defined bacterial infections may, however, require more than 5 days of therapy before defervescence occurs.

Reassessment should include:

- Review of all previous culture results
- A meticulous physical examination
- Chest x-ray
- Status of all vascular catheters
- Additional blood cultures
- Specimens of specific sites of infection
- Diagnostic imaging of any organ suspected of having infection
- If possible, serum concentrations of antibiotics, especially aminoglycosides

Appendix 2

Antibiotics requiring dose Adjustments in Patients with Renal Dysfunction

- Ceftazidime
- Vancomycin
- Ciprofloxacin
- Amoxicillin/Clavulanate
- Piperacillin/Tazobactam
- Imipenem-cilastatin

Readily accessible resources to consult when determining dose reductions include the CPS, Micromedex and Lexicomp

Appendix 4

Vancomycin Use

There are some instances when Vancomycin should be initiated immediately. These are:

- Hemodynamic instability or other evidence of severe sepsis
- Pneumonia documented radiographically
- Positive blood culture for gram-positive bacteria, before final identification and susceptibility testing is available
- Clinically suspected serious catheter related infection (e.g. chills or rigors with infusion through catheter and cellulitis around the catheter entry/exit site)
- Skin or soft-tissue infection at any site
- Colonization with MRSA or cephalosporin-resistant Streptococcus pneumoniae
- Severe mucositis, if fluoroquinolone prophylaxis has been given and Ceftazidime is employed as empirical therapy